What is claimed is:

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1. A video coding apparatus comprising:

coding/decoding circuitry for providing motion-compensated inter-frame prediction coding on input frames by using reference frames so that the input frames are coded into an intra-frame coded picture, a predictive coded picture or a bi-directionally predictive coded picture and decoding said coded frames to produce said reference frames; and

decision circuitry for determining a magnitude of motion of said input frames relative to said reference frames, determining an interval between successive frames of said predictive coded picture according to the magnitude of motion, and reordering said input frames according to the determined interval.

2. A video coding apparatus as claimed in claim 1, wherein said decision circuitry is configured to increase said interval when the determined magnitude of said motion decreases and decreases said interval when the determined magnitude of said motion increases.

3. A video coding apparatus as claimed in claim 1, wherein said decision circuitry is configured to increment said interval when said magnitude of motion is smaller than a first threshold and decrement said interval when said magnitude of motion is greater than a second threshold.

4. A video coding apparatus comprising:

a first memory for storing a plurality of input frames;

a second memory for storing reference frames;

motion vector detection circuitry for detecting motion vectors in frames from said first memory relative to reference frames selectively supplied from said second memory according to a control signal;

coding/decoding circuitry for providing motion-compensated inter-frame prediction and coding on a frame supplied from said first memory according to the detected motion vectors and said control signal so that the frame is coded into an intra-frame coded picture, a predictive coded picture or a bi-directionally predictive coded picture and locally decoding the coded frame and storing the decoded frame in said second memory as one of said reference frames;

mean value calculation circuitry for calculating, at frame intervals, a mean value of the detected motion vectors; and

decision circuitry for determining an interval between successive frames of said predictive coded picture according to the mean value, and modifying said control signal according to the determined interval.

5. A video coding apparatus as claimed in claim 4, wherein said decision circuitry is configured to increase said interval when said mean value decreases and decrease said interval when said mean value increases.

6. A video coding apparatus as claimed in claim 4, wherein said decision circuitry is configured to increment said interval when said mean value is smaller than a first threshold and decrement said interval when said mean value is greater than a second threshold.

7. A video coding apparatus as claimed in claim 6, wherein said mean value comprises a horizontal component and a vertical component and wherein said decision circuitry is configured to increment said interval when said horizontal and vertical components are simultaneously smaller than respective thresholds and decrement said interval when one of said horizontal and vertical components is greater than a threshold.

8. A video coding apparatus as claimed in claim 6, wherein said decision circuitry is configured to determine a time-varying rate of said mean value and increment said interval when the time-varying rate is smaller than a predetermined rate.

9. A video coding apparatus as claimed in claim 8, wherein said mean value comprises a horizontal component and a vertical component and wherein said decision circuitry is configured to determine, as said time-varying rate, a difference between successive ones of said mean value of horizontal component and a difference in a vertical direction between successive ones of said mean value of vertical component and increment said interval when said differences are simultaneously smaller than respective thresholds.

10. A video coding apparatus as claimed in claim 4, wherein

said coding/decoding circuitry comprises:

motion-compensated inter-frame prediction circuitry for performing motion-compensated inter-frame prediction on an input frame supplied from said first memory according to the detected motion vectors and to a control signal applied thereto;

subtraction circuitry for producing a differential frame from a frame supplied from the first memory and an output signal of said prediction circuitry;

encoding circuitry for coding said differential frame so that said input frame is coded into an intra-frame coded picture, a predictive coded picture or a bi-directionally predictive coded picture;

decoding circuitry for decoding the coded differential frame; and

summing circuitry for producing a combined frame from the decoded differential frame and the output of signal of said prediction circuitry and storing the combined frame into said second memory.

11. A video coding apparatus as claimed in claim 10, wherein said encoding circuitry comprises a discrete cosine transform (DCT) coder for transforming said differential frame to DCT coefficients, a quantizer for quantizing the DCT coefficients, and a variable length coder for transforming the quantized coefficients and the motion vector detected by said motion vector detection circuitry to run-length codes, and wherein said decoding circuitry comprises a dequantizer for dequantizing the quantized

differential frame and a DCT decoder for decoding the dequantized differential frame.

12. A video coding method comprising the steps of:

a) providing motion-compensated inter-frame prediction and coding on input frames by using a reference frame so that the input frames are coded into an intra-frame coded picture, a predictive coded picture or a bi-directionally predictive coded picture;

b) locally decoding said coded frames to produce said reference frames;

c) determining a magnitude of motion of said input frames relative to said reference frames;

d) determining an interval between successive frames of said predictive coded picture according to the determined magnitude of motion; and

e) reordering said input frames according to the determined interval.

13. A video coding method as claimed in claim 12, wherein the step (c) comprises the steps of detecting motion vectors in said input frames relative to said reference frames and calculating, at frame intervals, a mean value of the detected motion vectors to represent said magnitude of motion.

14. A video coding method as claimed in claim 12, wherein

the step (d) comprises increasing said interval when the determined magnitude of motion decreases and decreasing said interval when the determined magnitude of motion increases.

15. A video coding method as claimed in claim 12, wherein the step (d) comprises the step of incrementing said interval when said mean value is smaller than a first threshold and decrementing said interval when said mean value is greater than a second threshold.

16. A video coding method as claimed in claim 17, wherein said mean value comprises a horizontal component and a vertical component and wherein the step (d) comprises the steps of incrementing said interval when said horizontal and vertical components are simultaneously smaller than respective thresholds and decrementing said interval when one of said horizontal and vertical components is greater than a threshold.

17. A video coding method as claimed in claim 15, wherein the step (d) further comprises the steps of determining a time-varying rate of said mean value and incrementing said interval when the time-varying rate is smaller than a predetermined rate.

18. A video coding method as claimed in claim 17, wherein said mean value comprises a horizontal component and a vertical component and wherein the step (d) comprises the steps of determining, as said time-varying rate, a difference between successive ones of said mean value of horizontal component and a difference in a vertical direction between successive ones of said mean value of

vertical component and incrementing said interval when said differences are simultaneously smaller than respective thresholds.